# STORRS CENTER SPECIAL DESIGN DISTRICT MASTER PARKING STUDY PURSUANT TO MANSFIELD ZONING REGULATIONS ARTICLE X, SECTION T.3.c (ii)

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#### **Master Parking Study for Storrs Center**

#### Introduction

The purpose of the Storrs Center Parking Shared Use Analysis is to provide a methodology that will be used to determine the peak parking demand generated by the Storrs Center development program and to compare the peak demand with the proposed parking supply. This analysis is intended to satisfy the requirement of a comprehensive parking study in support of an application to amend the Mansfield Zoning Map to designate certain properties located within the area of the Storrs Center Municipal Development Plan as Storrs Center Special Design District (SDD).

The analysis accomplishes this task in five steps. First, the estimated master development program for the project is identified and set forth by land use type. Second, base parking demand factors are identified for each different land use type, consistent with accepted industry data. Third, adjustments are made to each base demand factor according to accepted methodologies of shared use analysis (e.g., proximity to university, availability of transit and pedestrian connections, synergy of uses). Fourth, parking demand for the project is calculated by multiplying the adjusted demand factors by the equivalent units of development program across all hours of the day and evening. Finally, proposed parking supply is identified and compared with the peak parking demand. Using the estimated program as the basis for the report, the analysis concludes that the project proposes an adequate amount of parking to accommodate the peak demand generated by the entire development program for the project as currently planned.

The analysis is broken down into four phases which correlate roughly to the anticipated phasing of project construction. The four-phase parking analysis presented in this report is intended to demonstrate that adequate parking will be present not only at the completion of the project, but also at key points during construction. This is consistent with the applicant's intent to build the project over a period of years and to operate completed portions of the project as construction progresses. The phases identified in this report are necessarily general in nature and represent "snap shots" of possible future conditions. This report is not a specific statement of proposed development phasing. Rather, this report creates a methodology for understanding parking demand and its relationship to parking supply in Storrs Center. Although this analysis concludes that an adequate parking supply will be available to meet the anticipated phasing of construction, the specific zoning permit applications that will be submitted to the Town pursuant to the requirements of the Zoning Regulations can demonstrate adequate parking through the use of this methodology.

#### The Project

Storrs Center is a mixed-use project located in the Town of Mansfield adjacent to the University of Connecticut. The project is comprised of four neighborhoods or phases which may overlap during construction Phase 1 – Town Square, Phase 2 – Village Street,

Phase 3 – Residential, and Phase 4 – Market Square. Figure 1 illustrates the project's phasing while Tables 1a and 1b summarize the land use types and estimated densities by phase.

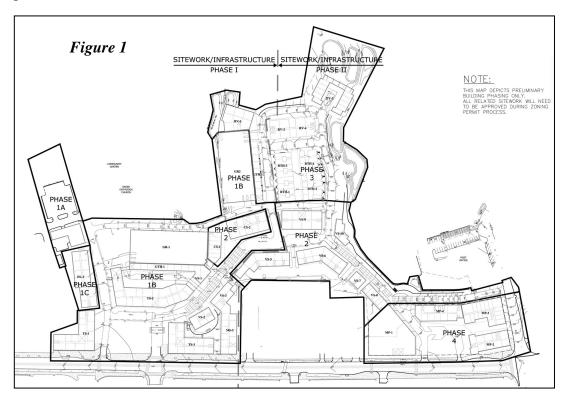


Table 1a Storrs Center Phasing

	Phase 1 Phase 2		Phase	3	Phase 4			
Land Use	Area (SF)	Units	Area (SF)	Units	Area (SF)	Units	Area (SF)	Units
Residential		318		154		101		117
Restaurant								
- Sit Down Restaurant	21,117		6,596		0		8,159	
- Fast-Food/Grab-N-Go	14,136		8,915		0		2,144	
Office	4,300		10,006		0		32,437	
Community Shopping	28,604		25,188		0		37,227	

Table 1b Storrs Center Phasing – Cumulative

	Phase	1	Phase 2		Phase 3		Phase 4	
Land Use	Area (SF)	Units						
General Residential		318		472		573		690
Restaurant								
- Sit Down Restaurant	21,117		27,713		27,713		35,872	
- Fast-Food/Grab-N-Go	14,136		23,051		23,051		25,195	
Office	4,300		14,306		14,306		46,743	
Community Shopping	28,604		53,792		53,792		91,019	

At final build-out, the project will include community shopping, office, restaurant, and residential uses. The following defines to the extent possible the type and nature of land use activities anticipated.

**Residential**: includes for sale and for rent residential units in various configurations such as studios, lofts, condos, townhouses, flats, live/work units, condo rentals, duplexes, single family residences, and various types of multi-family residences, as allowed within the SDD.

**Restaurant/Sit-Down**: includes sit-down and non-fast food restaurants, family restaurants, tapas restaurants, crepe restaurants, bistros or other specialty food venues with full service, entertainment, dance, and music venues serving food, and other sit down venues offering full service dining, as allowed within the SDD.

**Restaurant/Fast Food**: includes take-out pizzerias, sandwich shops, ice cream, treat shops, bagel shops, candy shops, and other food/retail venues with primary take-away and/or counter top food components, as allowed within the SDD.

*Office:* includes all types of office space compatible with the characteristics of this development, as allowed within the SDD.

**Retail:** includes all types of community shopping compatible with the characteristics of this development, including clothing and shoe stores, housewares, office supply stores, food stores, art supply stores, pharmacies, wine and cheese stores, liquor stores, craft shops, music shops, galleries, student shops, and other retail stores, and all services such as bank/ATM, yoga and exercise venues, daycare, cleaners, laundromats, copy shops, travel agencies, computer service, etc., as allowed within the SDD.

The initial two phases of the project will include two stand-alone parking structures as well as a number of on-street (curb-side) spaces. The fact that this mixed-use development will be adjacent to a large university is critical from a market/tenant leasing perspective and therefore from a parking demand standpoint. The developer is well aware of the market effect that the University will have on the type of retail, restaurant, and residential tenants. Many of the shops and restaurants themselves may be targeting their goods and services to University clientele. DESMAN's experience and associated analysis of similarly programmed locations suggests that 20% to 80% of restaurant and retail patrons, depending on the type of business, do not arrive at the shopping/dining destination via the automobile. For example, many are students and faculty who walk from their classroom or housing having already parked, or they are visitors who walk or arrive by transit. Additionally, the parking need associated with higher density residential developments that are contiguous to university environments is lower than similar/traditional development. Some reduction in auto utilization patterns should be anticipated given the proximity of the University. Finally, the internal "synergy" between and among commercial uses can be dramatic. An individual on one single trip (one single parking event) could frequent multiple destinations. For example, one parking event could relate to lunch at a restaurant, a stop at a shoe store, and a stop at a clothier, or dinner.

#### The Concept of "Shared Use"

The key to this analysis revolves around the concept of "Shared Use". Shared use reflects the ability for various land use activities to share a particular supply of parking without shortfall. Different land use activities (office, residential, retail, etc.) exhibit different parking accumulation patterns.

Fortunately, the concept of shared use has been carefully evaluated by the Urban Land Institute and a number of factors are used to arrive at shared use calculations. These factors include peak demand ratios (specific to each land uses' individual peak hour), seasonal/monthly adjustments, hourly parking accumulation patterns (6 AM to 12 AM), reductions associated with alternative modes of travel (bus, bike, walk, etc.), and reductions associated with development "synergy". While the first three factors, (peak demand ratios, monthly adjustments, and parking accumulation patterns) are fairly well documented and established, parking demand reductions associated with auto use/walking patterns and synergy are unique to each municipality and development and therefore should be analyzed on a case by case basis. In an effort to clearly illustrate the assumptions used to model the unique parking demand associated with Storrs Center and the project's proximity to the University, peak parking demand ratios were developed by Desman and reviewed by the Town's parking consultant, Tighe & Bond, Inc. The resulting peak ratios are referenced as the base ratios to which appropriate and representative adjustments are made.

#### **Base Parking Demand Ratios (Urban Land Institute)**

Table 2 illustrates the peak parking demand ratios for a weekday and a weekend for various land use categories as developed by DESMAN and reviewed by Tighe & Bond. These ratios are based in part on research completed by the Urban Land Institute (ULI Shared Parking Second Edition), the Town of Mansfield's current off-street parking requirements (Code), and research and application as experienced and recommended previously by DESMAN and reviewed by Tighe & Bond. These ratios represent the peak parking demand that would be generated for each of these uses independently.

Table 2
Base Parking Demand Ratios

	Peak 1	Peak Ratio				
Land Use Type	Weekday	Weekend	Unit			
Residential/Suburban (Negligible Transit)	1.25	1.25	Unit			
Restaurant/Eating-Drinking Place	9.5	9.5	/1000 sf GLA			
Restaurant/Fast-Food	5.7	5.7	/1000 sf GLA			
Office/Suburban (<250ksf)	2.75	0.5	/1000 sf GLA			
Community Shopping Center (<400ksf)	3	3	/1000 sf GLA			

<sup>\*</sup> Per 1000 sf of Gross Leasable Area

#### **Adjustments to Base Parking Demand Ratios**

Based on DESMAN's experience in similar projects, adjustments were made for the expected auto use and pedestrian use (walking, biking, public transit, etc.) and are identified in Table 3a. These adjustments capture the interrelationship between land uses within the mixed use development. For example, the Restaurant/Sit-Down ratio in Table 2 for a weekday was reduced by 10% (0.9 auto use/walking adjustment) to account for the number of individuals who would walk or bike from nearby areas. It was then further reduced by 10% (0.9 synergy factor) to reflect the number of on-site employees, residents, and/or shoppers who already parked in association with a previous (shopper) or primary (employee/resident) trip purpose and then went to lunch or dinner. Therefore, the peak parking demand ratio to be applied to Restaurant/Sit-Down for a weekday is reduced from 9.5 spaces per 1,000 gross square feet (gsf) as illustrated on Table 2 to 7.2 spaces per 1,000 as illustrated on Table 3b.

Table 3a
Recommended Adjustments to Base Parking Ratios

v						
		Weekday		W	eekend (3)	
Land Use Type	Auto/Walki ng (1)	Synergy (2)	Total Adj.	Auto/Walking (1)	Synergy (2)	Total Adj.
Residential/Suburban (Negligible Transit)	1.00	1.00	1.00	1.00	1.00	1.00
Restaurant/Sit-Down	0.90	0.90	0.81	0.80	0.90	0.72
Restaurant/Fast-Food	0.80	0.90	0.72	0.70	0.90	0.63
Office/Suburban (<250ksf)	1.00	0.95	0.95	1.00	0.95	0.95
Community Shopping Center (<400ksf)	0.90	0.90	0.81	0.90	0.90	0.81

#### Note:

The base parking demand ratios that would be reflective of conditions for Storrs Center were adjusted and are presented on Table 3b.

<sup>(1)</sup> Reflects percentage of individuals who would walk, bike, or are dropped off, and would therefore represent a reduction in onsite parking demand.

<sup>(2)</sup> Reflects percentage of individuals who would have already parked in association with their primary trip purpose and/or multiple purpose (shopping) trips.

<sup>(3)</sup> A higher relative proportion of students will frequent the fast-food restaurants on a weekend than on a weekday. Therefore the transit use (adjustment reduction) is larger.

Table3b Weekday and Weekend Parking Demand Ratios Recommended for Storrs Center

Land Use Type	Peak Demand Ratios Weekday	Weekend	Unit
Zuna Ssc Type	century	· · · concina	
Residential/Suburban (Negligible Transit)	1.25	1.25	unit
Restaurant/Sit-Down	7.70	6.84	/1000 sf GLA
Restaurant/Fast-Food	4.10	3.59	/1000 sf GLA
Office/Suburban (<250ksf)	2.61	0.48	/1000 sf GLA
Community Shopping Center (<400ksf)	2.43	2.43	/1000 sf GLA

<sup>\*</sup> Per 1000 Sf of Gross Leasable Area

#### Notes:

(1) For a performing arts theater or cinema, the parking factor shall be 0.33 parking spaces per seat.

Other typical adjustments to shared-use parking demand ratios include monthly fluctuations. ULI's Shared Parking Second Edition has documented monthly/seasonal variations associated with a number of land use types and presents these fluctuations as a percentage of each activities peak month. For example, retail activity (sales) peak during the holiday seasons, namely December. Therefore, all other months reflect only a percentage of December's retail volume. However, seasonal variations in land use activity obtained from ULI's national surveys may not be representative of Mansfield, Connecticut, a classic example of a "college town". Therefore, the parking demand for each land use activity is based on its seasonal peak. In effect, no reduction in parking demand associated with seasonal variations has been assumed, which is a conservative approach.

The variation in parking demand generated by different land use activities by time of day, however, is one of the foundations of the ULI shared-use principle and should be applied to the peak ratios illustrated on Table 3b. Tables 3c and 3d illustrate the representative hourly accumulation pattern associated with the different land use types, broken down by hour of day. For the purposes of this analysis an average of 1.25 spaces per residential dwelling unit is presumed to be reserved as part of the apartment lease or condominium purchase. As such, no reduction for parking accumulation patterns/shared use is assumed for this land use category.

Table 3c Recommended Weekday Parking Accumulation Patterns as a Percent of the Peak Period

Hour of Day	Office	Retail	Restaurant	Residential
6:00 AM	3%	1%	5%	100%
7:00 AM	30%	5%	10%	100%
8:00 AM	75%	15%	20%	100%
9:00 AM	95%	30%	30%	100%
10:00 AM	100%	55%	55%	100%
11:00 AM	100%	75%	85%	100%
12:00 Noon	90%	90%	100%	100%
1:00 PM	90%	100%	100%	100%
2:00 PM	100%	100%	90%	100%
3:00 PM	100%	100%	60%	100%
4:00 PM	90%	95%	55%	100%
5:00 PM	50%	85%	60%	100%
6:00 PM	25%	80%	85%	100%
7:00 PM	10%	75%	80%	100%
8:00 PM	7%	65%	50%	100%
9:00 PM	3%	50%	30%	100%
10:00 PM	1%	30%	20%	100%
11:00 PM	0%	10%	10%	100%
12:00 Midnight	0%	0%	5%	100%

Table 3d Recommended Weekend Parking Accumulation Patterns as a Percent of the Peak Period

Hour of Day	Office	Retail	Restaurant	Residential
6:00 AM	0%	1%	5%	100%
7:00 AM	20%	5%	10%	100%
8:00 AM	60%	10%	20%	100%
9:00 AM	80%	30%	30%	100%
10:00 AM	90%	50%	55%	100%
11:00 AM	100%	65%	85%	100%
12:00 Noon	90%	80%	100%	100%
1:00 PM	80%	90%	100%	100%
2:00 PM	60%	100%	90%	100%
3:00 PM	40%	100%	60%	100%
4:00 PM	20%	95%	55%	100%
5:00 PM	10%	90%	60%	100%
6:00 PM	5%	80%	85%	100%
7:00 PM	0%	75%	80%	100%
8:00 PM	0%	65%	50%	100%
9:00 PM	0%	50%	30%	100%
10:00 PM	0%	35%	20%	100%
11:00 PM	0%	15%	10%	100%
12:00 Midnight	0%	0%	5%	100%

#### **Storrs Center Parking Demand**

DESMAN calculated the parking demand for four estimated phases of the Storrs Center project using the weekday and weekend base factors and hourly shared use adjustments. The weekday and weekend results are indicated on Appendix Tables 6 through 13 for each land use and each phase. Table 4 summarizes the overall peak results.

Table 4
Summary of Peak Weekday and Weekend Parking Demand

	Peak Park	ing Demand
	Weekday	Weekend
Phase 1	698	657
Phase 2	1,062	985
Phase 3	1,188	1,112
Phase 4	1,573	1,415

#### **Storrs Center Parking Supply and Demand Comparison**

Prior to the determination of parking surplus or deficit for each phase of the Storrs Center project some discussion of practical capacity is required. Practical capacity relates to the operational efficiency of a parking lot, garage, or system. Depending on the type of parker (employee vs. visitor), that individual will perceive the parking facility as full when occupancy levels reach between 90% and 95%. Once this level is exceeded, potential parkers find it difficult to locate an available space. As a result, these individuals may abandon their search for parking. The effective and efficient turnover of convenient parking spaces is most successful when the supply of spaces exceeds the parking demand for those spaces by 5-15%. For the purpose of this study, a 90% practical capacity will be used for all non-reserved parking facilities. Given the one vehicle per one space assumption regarding reserved residential parking, no adjustments/reduction for practical capacity will be applied to these spaces.

Phase 1 would include approximately 705 spaces of structured parking and approximately 47 on-street spaces. The practical capacity calculation for this phase equals 717 spaces. Phase 2 would include additional structured parking with approximately 507 spaces plus 19 surface spaces. The total practical capacity figure for both phases equals 1,209 spaces. Though no additional parking will be developed under Phase 3, the practical capacity calculation is recalibrated to account for an increase in spaces reserved for residential use (1,222 total). At full build-out, a total parking supply of 1,655 spaces is anticipated, including a practical capacity of 1,576 spaces.

Based on the estimated peak weekday and weekend demand figures and the determination of practical capacity it appears that no deficit of parking spaces above and beyond the recommended practical capacity level exists. Note that peak weekday and weekend demand does not exceed the project's total capacity at any phase. Figures 2, 3, 4, and 5 graphically illustrate the supply (dashed line) and hour demand volumes for Phases 1, 2, 3, and at project completion.

Table 5
Weekday and Weekend Practical Parking Surplus or Deficit

	Parking Supply	Practical Capacity	Peak Weekday Demand	Surplus/Deficit	Peak Weekend Demand	Surplus/Deficit
Phase 1	752	717	698	19	657	60
Phase 2	1,278	1,209	1,062	147	985	224
Phase 3	1,278	1,222	1,188	34	1,112	110
Phase 4	1,655	1,576	1,573	3	1,415	161

<sup>\*</sup> A total parking supply of 1,655 spaces is assumed at the completion of the project

Figure 2

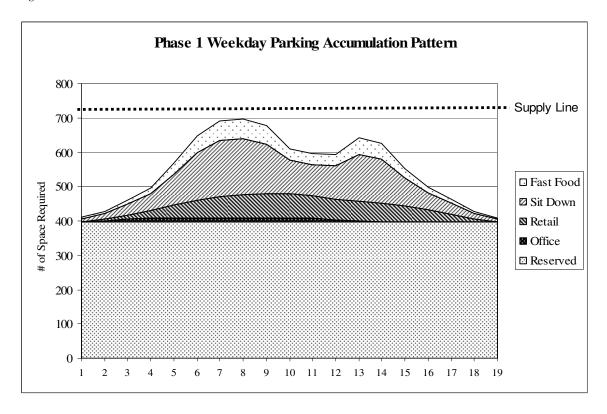


Figure 3

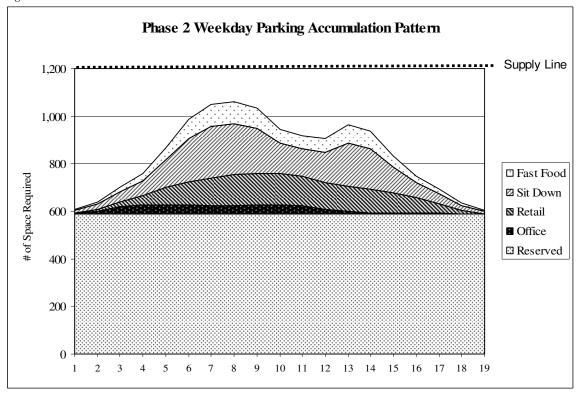


Figure 4

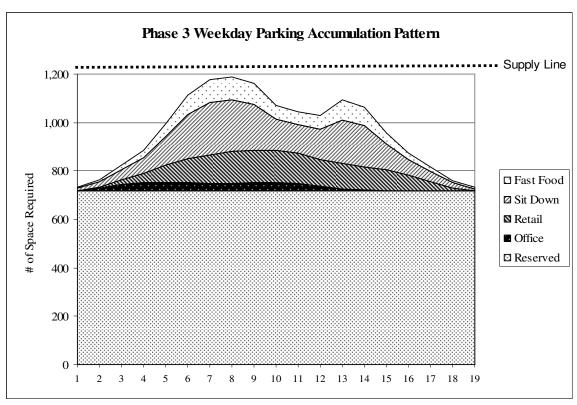
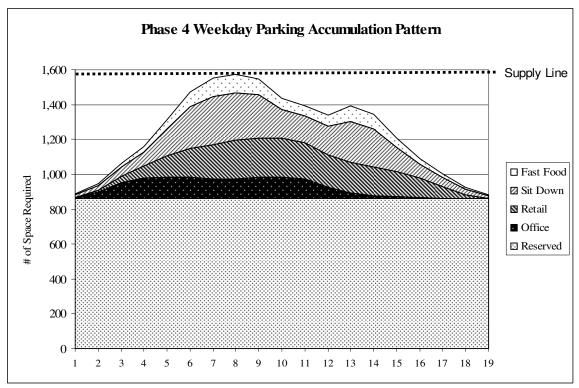


Figure 5



#### **Parking Stall Size Dimensions**

In this application the proposed size for structured parking space is 8'-6"x 18'with 24' drive aisles and 26' end aisles as contained in the "Guidelines for Parking Geometrics" published by the Parking Consultant Council (PCC) of the National Parking Association.

Desman's experience supports the PCC recommendation as being sufficient for employee, residential and visitor parking for all but high turnover spaces. High turnover spaces are curbside parallel or those in front of certain retail establishments. Parking structures and surface lots in urban areas, both in Connecticut and around the country are typically striped at 8'-6" x 18". For example, the spaces in the Blueback Square Garage projects are striped at 8'-6" as are the spaces in the University of Connecticut garages and most all of the downtown Hartford parking facilities. These parking facilities function at a high level of service and customer comfort. Following is a summary of the proposed dimensions of parking spaces within the project:

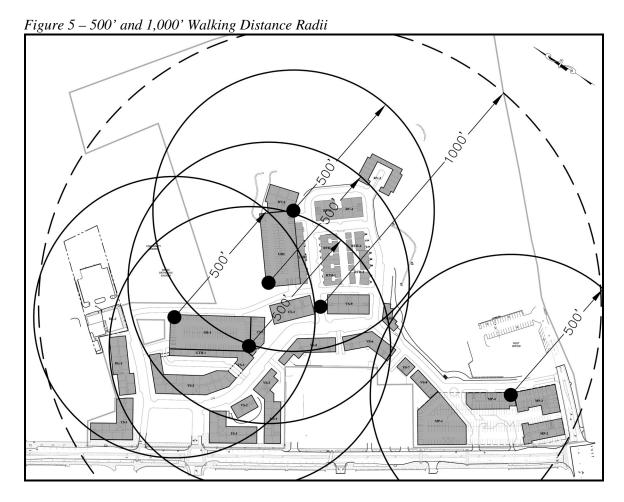
#### **Summary of Proposed Dimensions**

- Structural parking decks supporting mixed uses: 8'-6" x 18'.
- Small surface lots for mixed residential uses: 8'-6" x 18'.
- Higher turnover surface lots serving mixed uses: 9'-0" x 18'.
- Curbside On-street parallel parking spaces within the town environment 8' x 22'.

#### **Acceptable Walking Distance**

The analysis of parking supply and demand indicates that the project will meet its parking demand during each phase. Next, the report analyzes the relative proximity of parking to demand. Acceptable walking distance relates to an individual's perceived level of convenience from their parked location to the primary destination. The ULI suggests that acceptable walking distances can vary from 300 feet to 1,500 feet, depending on land use type and the user's trip purpose. For simplicity of illustration, Figure 5 illustrates walking distance radii of 500 feet and 1000 feet from the pedestrian entrances to each parking structure (and the project core). This illustration demonstrates that all land use activities would be within an acceptable walking distance of the proposed parking facilities.

Actual parking usage for any land use type may draw upon a supply area that is located within a wide radius of the nearest garage entry area. Consequently, demand for uses in Phase 1 may have parking supply located within Garage 2 and vice versa as long as the demand area and the supply area are within an acceptable walking distance. Though the phasing does reflect a general correspondence between constructions and parking supply, actual supply need not be provided within the limits of individual construction phases.



#### **Interim Parking Facilities**

During construction of the project, it may become necessary or desirable to develop temporary parking facilities on the undeveloped portions of the site. Interim facilities may be used to accommodate parking for project patrons as long as they meet necessary safety and distance requirements. Interim facilities may also be used to accommodate construction operations and such facilities should be identified in the pertinent zoning permit applications.

#### Periodic Recalibration of Base Factors and Adjustments

The base factors for shared use analysis for Storrs Center are based on assumptions about transportation dynamics at work in the specific context of Mansfield and very specifically with respect to the location of Storrs Center next to the main campus of the University of Connecticut. Determinations of actual parking needs over time may reflect lesser or greater requirements with respect to the base factor for any specific land use. For example, a greater or lesser number of visitations to Storrs Center could come from pedestrian and University shuttle activity than currently anticipated or the project may attract users with higher or lower car ownership characteristics. A better method for illustrating such variations from anticipated usage is the use of a survey to determine how many of the parking spaces are actually being employed for the specific designated uses. Such information can be used for a periodic recalibration of the base factors and to determine if changes to garage operational procedures are warranted. At the request of the Director of Planning, Storrs Center could perform a survey and recalibration upon completion of that portion of the project intended to be accommodated in the structured parking facilities (Phases 1 and 2). At the request of the Director of Planning, the survey would be performed to identify the 85<sup>th</sup> percentile of peak daily usage associated with the designated land use categories. Base parking demand factors could then be adjusted up or down accordingly for the remaining phases of the project. During the review of any zoning permit application, the consideration of consistency with the Master Parking Study shall include review of the parking factors for the specific land uses that have been proposed. The Director of Planning is authorized to require a current shared use analysis during the review of any zoning permit application.

#### Conclusion

The base factors for shared use analysis for Storrs Center are based on assumptions about transportation dynamics at work in the specific context of Mansfield and very specifically with respect to the location of Storrs Center, the adjacent main campus of the University of Connecticut, the E.O. Smith High School, the Mansfield Town Hall, and the Mansfield Community Center. Determination of actual parking needs over time may reflect lesser or greater requirements with respect to the base factor for any specific land use. For example, a greater or lesser number of visitations to Storrs Center could come from pedestrian and University shuttle activity than currently anticipated. Or the project may also attract users with higher or lower car ownership characteristics.

This report demonstrates how parking demand and supply requirements for Storrs Center will be determined and how the proposed parking supply will be used to satisfy the peak parking demand generated by the proposed land use program for Storrs Center.

### **APPENDIX**

TABLE 6 Storrs Center Shared Use Analysis - Phase 1

Representative Weekday Hourly Accumulation of Parkers Generated by Future Development

	Future Development						
	Office	Retail	Resta	urant	Residential		
			Sit	Fast			
			Down	Food	Reserved		
Size Factors>	4,300	28,604	21,117	14,136	318		
						Total	
						Parking	
<b>Hour of Day</b>	_	_		_	_	Demand	
6:00 AM	0	1	8	3	398	410	
7:00 AM	3	3	16	6	398	426	
8:00 AM	8	10	32	12	398	460	
9:00 AM	11	21	49	17	398	495	
10:00 AM	11	38	89	32	398	568	
11:00 AM	11	52	138	49	398	648	
12:00 Noon	10	63	162	58	398	691	
1:00 PM	10	70	162	58	398	698	
2:00 PM	11	70	146	52	398	677	
3:00 PM	11	70	97	35	398	611	
4:00 PM	10	66	89	32	398	595	
5:00 PM	6	59	97	35	398	595	
6:00 PM	3	56	138	49	398	643	
7:00 PM	1	52	130	46	398	627	
8:00 PM	1	45	81	29	398	554	
9:00 PM	0	35	49	17	398	499	
10:00 PM	0	21	32	12	398	463	
11:00 PM	0	7	16	6	398	427	
12:00 Midnight	0	0	8	3	398	409	

TABLE 7
Storrs Center Shared Use Analysis - Phase 1

Representative Weekend Hourly Accumulation of Parkers Generated by Future Development

Hour of Day         5         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         644           3:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 PM         0			ruture	Developi	пені		
Size Factors>         4,300         28,604         Down 21,117         Food 14,136         Reserved 318           Hour of Day 6:00 AM         0         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         571           5:00 PM		Office	Retail			Residential	
Hour of Day         6:00 AM         0         1         7         3         398         408           7:00 AM         0         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 PM							
Hour of Day         -         -         -         -         -         -         Total Parking Demand           6:00 AM         0         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         651           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 P							
Hour of Day         2         2         2         Parking Demand           6:00 AM         0         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         651           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         644           3:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87 </td <td>Size Factors&gt;</td> <td>4,300</td> <td>28,604</td> <td>21,117</td> <td>14,136</td> <td>318</td> <td></td>	Size Factors>	4,300	28,604	21,117	14,136	318	
Hour of Day         5         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         644           3:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 PM         0							Total
6:00 AM         0         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         644           3:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 PM         0							Parking
6:00 AM         0         1         7         3         398         408           7:00 AM         0         3         14         5         398         421           8:00 AM         1         7         29         10         398         445           9:00 AM         2         21         43         15         398         479           10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         644           3:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 PM         0	Hour of Day						Demand
8:00 AM       1       7       29       10       398       445         9:00 AM       2       21       43       15       398       479         10:00 AM       2       35       79       28       398       541         11:00 AM       2       45       123       43       398       611         12:00 Noon       2       56       144       51       398       650         1:00 PM       2       63       144       51       398       657         2:00 PM       1       70       130       46       398       644         3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35		0	1	7	3	398	408
9:00 AM       2       21       43       15       398       479         10:00 AM       2       35       79       28       398       541         11:00 AM       2       45       123       43       398       611         12:00 Noon       2       56       144       51       398       650         1:00 PM       2       63       144       51       398       657         2:00 PM       1       70       130       46       398       644         3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	7:00 AM	0	3	14	5	398	421
10:00 AM         2         35         79         28         398         541           11:00 AM         2         45         123         43         398         611           12:00 Noon         2         56         144         51         398         650           1:00 PM         2         63         144         51         398         657           2:00 PM         1         70         130         46         398         644           3:00 PM         1         70         87         30         398         585           4:00 PM         0         66         79         28         398         571           5:00 PM         0         63         87         30         398         577           6:00 PM         0         56         123         43         398         619           7:00 PM         0         52         116         41         398         606           8:00 PM         0         45         72         25         398         540           9:00 PM         0         35         43         15         398         491	8:00 AM	1	7	29	10	398	445
11:00 AM       2       45       123       43       398       611         12:00 Noon       2       56       144       51       398       650         1:00 PM       2       63       144       51       398       657         2:00 PM       1       70       130       46       398       644         3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	9:00 AM		21	43	15	398	479
12:00 Noon       2       56       144       51       398       650         1:00 PM       2       63       144       51       398       657         2:00 PM       1       70       130       46       398       644         3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	10:00 AM	2	35	79	28	398	541
1:00 PM       2       63       144       51       398       657         2:00 PM       1       70       130       46       398       644         3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	11:00 AM	2	45	123	43	398	611
2:00 PM       1       70       130       46       398       644         3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	12:00 Noon	2	56	144	51	398	650
3:00 PM       1       70       87       30       398       585         4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	1:00 PM	2	63	144	51	398	657
4:00 PM       0       66       79       28       398       571         5:00 PM       0       63       87       30       398       577         6:00 PM       0       56       123       43       398       619         7:00 PM       0       52       116       41       398       606         8:00 PM       0       45       72       25       398       540         9:00 PM       0       35       43       15       398       491	2:00 PM	1	70	130	46	398	644
5:00 PM     0     63     87     30     398     577       6:00 PM     0     56     123     43     398     619       7:00 PM     0     52     116     41     398     606       8:00 PM     0     45     72     25     398     540       9:00 PM     0     35     43     15     398     491	3:00 PM	1	70	87	30	398	585
6:00 PM     0     56     123     43     398     619       7:00 PM     0     52     116     41     398     606       8:00 PM     0     45     72     25     398     540       9:00 PM     0     35     43     15     398     491	4:00 PM	0	66	79	28	398	571
7:00 PM     0     52     116     41     398     606       8:00 PM     0     45     72     25     398     540       9:00 PM     0     35     43     15     398     491	5:00 PM	0	63	87	30	398	577
8:00 PM 0 45 72 25 398 <b>540</b> 9:00 PM 0 35 43 15 398 <b>491</b>	6:00 PM	0	56	123	43	398	619
9:00 PM 0 35 43 15 398 <b>491</b>	7:00 PM	0	52	116	41	398	606
	8:00 PM	0	45	72	25	398	540
10.00 70 4	9:00 PM	0	35	43	15	398	491
10:00 PM   0   24   29   10   398   <b>461</b>	10:00 PM	0	24	29	10	398	461
11:00 PM 0 10 14 5 398 <b>427</b>	11:00 PM	0	10	14		398	427
12:00 Midnight   0   0   7   3   398   <b>407</b>	12:00 Midnight	0	0	7	3	398	407

TABLE 8
Storrs Center Shared Use Analysis - Phase 2
Representative Weekday Hourly Accumulation of Parkers Generated by
Future Development

		1 utui	c Develop	'iiiciit		
	Office	Retail	Resta	urant	Residential	
			Sit	Fast		
			Down	Food	Reserved	
Size Factors>	14,306	53,792	27,713	23,051	472	
						Total
						Parking
<b>Hour of Day</b>	_	_		_	_	Demand
6:00 AM	1	1	11	5	590	608
7:00 AM	11	7	21	9	590	639
8:00 AM	28	20	43	19	590	699
9:00 AM	36	39	64	28	590	757
10:00 AM	37	72	117	52	590	869
11:00 AM	37	98	181	80	590	987
12:00 Noon	34	118	213	95	590	1,049
1:00 PM	34	131	213	95	590	1,062
2:00 PM	37	131	192	85	590	1,035
3:00 PM	37	131	128	57	590	943
4:00 PM	34	124	117	52	590	917
5:00 PM	19	111	128	57	590	905
6:00 PM	9	105	181	80	590	966
7:00 PM	4	98	171	76	590	938
8:00 PM	3	85	107	47	590	832
9:00 PM	1	65	64	28	590	749
10:00 PM	0	39	43	19	590	691
11:00 PM	0	13	21	9	590	634
12:00 Midnight	0	0	11	5	590	605

## TABLE 9 Storrs Center Shared Use Analysis - Phase 2 Representative Weekend Hourly Accumulation of Parkers Generated by Future Development

	ruture Development								
	Office	Retail		urant	Residential				
			Sit	Fast					
			Down	Food	Reserved				
Size Factors>	14,306	53,792	27,713	23,051	472				
						Total			
						Parking			
<b>Hour of Day</b>	_	_		_	_	Demand			
6:00 AM	Ō	1	9	$\overline{4}$	590	605			
7:00 AM	1	7	19	8	590	625			
8:00 AM	4	13	38	17	590	662			
9:00 AM	5	39	57	25	590	716			
10:00 AM	6	65	104	46	590	811			
11:00 AM	7	85	161	70	590	913			
12:00 Noon	6	105	190	83	590	973			
1:00 PM	5	118	190	83	590	985			
2:00 PM	4	131	171	74	590	970			
3:00 PM	3	131	114	50	590	887			
4:00 PM	1	124	104	46	590	865			
5:00 PM	1	118	114	50	590	872			
6:00 PM	0	105	161	70	590	926			
7:00 PM	0	98	152	66	590	906			
8:00 PM	0	85	95	41	590	811			
9:00 PM	0	65	57	25	590	737			
10:00 PM	0	46	38	17	590	690			
11:00 PM	0	20	19	8	590	637			
12:00 Midnight	0	0	9	4	590	604			
8-1-1	-	-	-						

TABLE 10
Storrs Center Shared Use Analysis - Phase 3
Representative Weekday Hourly Accumulation of Parkers Generated by
Future Development

	Office	Retail	Restaurant		Residential	
			Sit	Fast		
			Down	Food	Reserved	
Size Factors>	14,306	53,792	27,713	23,051	573	
						Total
***						Parking
Hour of Day	-	-		-	-	<b>Demand</b>
6:00 AM	1	1	11	5	716	734
7:00 AM	11	7	21	9	716	765
8:00 AM	28	20	43	19	716	825
9:00 AM	36	39	64	28	716	883
10:00 AM	37	72	117	52	716	995
11:00 AM	37	98	181	80	716	1,113
12:00 Noon	34	118	213	95	716	1,175
1:00 PM	34	131	213	95	716	1,188
2:00 PM	37	131	192	85	716	1,161
3:00 PM	37	131	128	57	716	1,069
4:00 PM	34	124	117	52	716	1,043
5:00 PM	19	111	128	57	716	1,031
6:00 PM	9	105	181	80	716	1,092
7:00 PM	4	98	171	76	716	1,064
8:00 PM	3	85	107	47	716	958
9:00 PM	1	65	64	28	716	875
10:00 PM	0	39	43	19	716	817
11:00 PM	0	13	21	9	716	760
12:00 Midnight	0	0	11	5	716	732

TABLE 11
Storrs Center Shared Use Analysis - Phase 3
Representative Weekend Hourly Accumulation of Parkers Generated by
Future Development

Tuture Bevelopment							
	Office	Retail		urant	Residential		
			Sit Down	Fast Food	Reserved		
Size Factors>	14,306	53,792	27,713	23,051	573		
						Total	
						Parking	
<b>Hour of Day</b>	_	_		_	_	<b>Demand</b>	
6:00 AM	0	1	9	4	716	731	
7:00 AM	1	7	19	8	716	751	
8:00 AM	4	13	38	17	716	788	
9:00 AM	5	39	57	25	716	843	
10:00 AM	6	65	104	46	716	938	
11:00 AM	7	85	161	70	716	1,039	
12:00 Noon	6	105	190	83	716	1,099	
1:00 PM	5	118	190	83	716	1,112	
2:00 PM	4	131	171	74	716	1,096	
3:00 PM	3	131	114	50	716	1,013	
4:00 PM	1	124	104	46	716	992	
5:00 PM	1	118	114	50	716	998	
6:00 PM	0	105	161	70	716	1,053	
7:00 PM	0	98	152	66	716	1,032	
8:00 PM	0	85	95	41	716	937	
9:00 PM	0	65	57	25	716	863	
10:00 PM	0	46	38	17	716	816	
11:00 PM	0	20	19	8	716	763	
12:00 Midnight	0	0	9	4	716	730	

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TABLE 12
Storrs Center Shared Use Analysis - Phase 4
Representative Weekday Hourly Accumulation of Parkers Generated by
Future Development

		I utu	t Develo	JIIICIIC	I	1
	Office	Retail	Restaurant		Residential	
			Sit	Fast		
			Down	Food	Reserved	
Size Factors>	46,743	91,019	35,872	25,195	690	
						Total
						Parking
<b>Hour of Day</b>	_	_		_		<b>Demand</b>
6:00 AM	4	2	14	5	863	887
7:00 AM	37	11	28	10	863	948
8:00 AM	92	33	55	21	863	1,063
9:00 AM	116	66	83	31	863	1,159
10:00 AM	122	122	152	57	863	1,315
11:00 AM	122	166	235	88	863	1,473
12:00 Noon	110	199	276	103	863	1,551
1:00 PM	110	221	276	103	863	1,573
2:00 PM	122	221	248	93	863	1,547
3:00 PM	122	221	166	62	863	1,433
4:00 PM	110	210	152	57	863	1,391
5:00 PM	61	188	166	62	863	1,339
6:00 PM	31	177	235	88	863	1,392
7:00 PM	12	166	221	83	863	1,344
8:00 PM	9	144	138	52	863	1,205
9:00 PM	4	111	83	31	863	1,091
10:00 PM	1	66	55	21	863	1,006
11:00 PM	0	22	28	10	863	923
12:00 Midnight	0	0	14	5	863	881

TABLE 13
Storrs Center Shared Use Analysis - Phase 4
Representative Weekend Hourly Accumulation of Parkers Generated by Future
Development

Development								
	Office	Retail	<b>Resta</b> Sit	urant Fast	Residential			
			Down	Food	Reserved			
Size Factors>	46,743	91,019	35,872	25,195	690			
						Total		
						Parking		
<b>Hour of Day</b>	_	_		_		<b>Demand</b>		
6:00 AM	0	2	12	5	863	882		
7:00 AM	4	11	25	9	863	912		
8:00 AM	13	22	49	18	863	965		
9:00 AM	18	66	74	27	863	1,047		
10:00 AM	20	111	135	50	863	1,178		
11:00 AM	22	144	209	77	863	1,314		
12:00 Noon	20	177	245	90	863	1,395		
1:00 PM	18	199	245	90	863	1,415		
2:00 PM	13	221	221	81	863	1,399		
3:00 PM	9	221	147	54	863	1,294		
4:00 PM	4	210	135	50	863	1,262		
5:00 PM	2	199	147	54	863	1,265		
6:00 PM	1	177	209	77	863	1,326		
7:00 PM	0	166	196	72	863	1,297		
8:00 PM	0	144	123	45	863	1,174		
9:00 PM	0	111	74	27	863	1,074		
10:00 PM	0	77	49	18	863	1,007		
11:00 PM	0	33	25	9	863	929		
12:00 Midnight	0	0	12	5	863	879		